

WHAT IS CLAIMED IS:

1. An interoperability system for providing access to a plurality of services by a plurality of users having associated client machines, each of the plurality of users being associated with one of a plurality of independent enterprises, the plurality of services being associated with and controlled by a plurality of independent service providers and employing a plurality of interfaces at least some of which are not directly interoperable, the system comprising:

at least one data store having a directory stored therein which maps an identity corresponding to each of the users to a policy framework which defines access policies relating to the services, the identity for each user identifying the associated enterprise, the at least one data store also having a plurality of rich client objects stored therein which are operable to be launched within browser environments on the client machines, and to interact with the services via the interoperability system; and

at least one computing device which is operable to connect with each of the client machines and each of the interfaces associated with the services, to selectively upload the rich client objects to the client machines with reference to the directory, and to selectively facilitate interaction among the uploaded rich client objects and the services with reference to the directory and the policy framework, thereby enabling the users associated with different ones of the enterprises to independently access the plurality of services using the interoperability system.

2. The system of claim 1 wherein selected ones of the rich client objects are operable to interact with each other on the client machines.

3. The system of claim 1 wherein the at least one computing device is operable to connect with a first one of the client machines in response to a sign-on request.
4. The system of claim 3 wherein the at least one computing device is operable to upload at least one of the rich client objects during a sign-on process initiated by the sign-on request.
5. The system of claim 3 wherein the at least one computing device is operable to upload at least one of the rich client objects in response to a subsequent request for a corresponding one of the services subsequent to the sign-on process.
6. The system of claim 1 wherein the at least one computing device is operable to facilitate interaction with the services using previously installed rich client objects on the client machines.
7. The system of claim 1 wherein the at least one computing device is operable to configure the policy framework for a particular one of the services in response to input received from the service provider of the particular service.
8. The system of claim 1 wherein the at least one computing device is operable to configure the policy framework for at least one of the users in response to input received from an authorized representative of the enterprise associated with the at least one user.

9. The system of claim 1 wherein the policy framework specifies any of access, authentication, and encryption policies for each of the services.

10. The system of claim 1 wherein each user identity includes any of the enterprise associated with the user, a role within the enterprise associated with the user, and an identifier of the client machine associated with the user.

11. The system of claim 1 wherein the at least one computing device is operable to connect with each of the client machines using any of HTTP, HTTPS, FTP, Secure FTP, EDI, INT, AS2, SMTP, and SOAP.

12. The system of claim 1 wherein the at least one computing device is operable to connect with each of the interfaces using any of HTTP, HTTPS, FTP, Secure FTP, EDI, INT, AS2, SMTP, and SOAP.

13. The system of claim 1 wherein the at least one computing device is operable to connect with selected ones of the client machines directly via a public wide area network.

14. The system of claim 1 wherein the at least one computing device is operable to connect with selected ones of the client machines via an enterprise network associated with the enterprise associated with the users corresponding to the selected client machines.

15. The system of claim 1 wherein the at least one computing device is operable using the policy framework to allow selected ones of the client machines to retain selected

ones of the uploaded rich client objects and other uploaded data when the selected client machines are not connected to the system.

16. The system of claim 15 wherein the at least one computing device is operable to receive offline data generated and cached by the selected uploaded rich client objects when the selected client machines are not connected to the system, the offline data being received by the at least one computing device when the selected client machines reconnect to the system.

17. The system of claim 15 wherein the at least one computing device is operable to generate and cache offline data relating to the selected client machines when the selected client machines are not connected to the system, the at least one computing device further being operable to transmit the offline data to the selected client machines when the selected client machines reconnect to the system.

18. The system of claim 1 wherein selective facilitation of the interaction includes facilitation of interaction between two or more of the services, thereby providing access to a composite service by at least some of the users.

19. A computer-implemented method for providing access to a plurality of services by a plurality of users having associated client machines, each of the plurality of users being associated with one of a plurality of independent enterprises, the plurality of services being associated with and controlled by a plurality of independent service providers

and employing a plurality of interfaces at least some of which are not directly interoperable, the method comprising:

selectively transmitting rich client objects to the client machines, the rich client objects being operable to be launched within browser environments on the client machines, and to interact with the services in accordance with a directory which maps an identity corresponding to each of the users to a policy framework which defines access policies relating to the services, the identity for each user identifying the associated enterprise; and

selectively facilitating interaction among the transmitted rich client objects and the services in accordance with the directory and the policy framework, thereby enabling the users associated with different ones of the enterprises to independently access the plurality of services using a single system.

20. The method of claim 19 wherein selected ones of the rich client objects are operable to interact with each other on the client machines.

21. The method of claim 19 further comprising establishing a connection with a first one of the client machines in response to a sign-on request.

22. The method of claim 21 further comprising transmitting at least one of the rich client objects during a sign-on process initiated by the sign-on request.

23. The method of claim 21 further comprising transmitting at least one of the rich client objects to the first client machine in response to a subsequent request for a corresponding one of the services subsequent to the sign-on process.

24. The method of claim 19 further comprising facilitating the interaction with the services using previously installed rich client objects on the client machines.

25. The method of claim 19 further comprising configuring the policy framework for a particular one of the services in response to input received from the service provider of the particular service.

26. The method of claim 19 further comprising configuring the policy framework for at least one of the users in response to input received from an authorized representative of the enterprise associated with the at least one user.

27. The method of claim 19 wherein the policy framework specifies any of access, authentication, and encryption technologies for each of the services.

28. The method of claim 19 wherein each user identity includes any of the enterprise associated with the user, a role within the enterprise associated with the user, and an identifier of the client machine associated with the user.

29. The method of claim 19 further comprising connecting with each of the client machines using any of HTTP, HTTPS, FTP, Secure FTP, EDI, INT, AS2, SMTP, and SOAP.

30. The method of claim 19 further comprising connecting with each of the interfaces using any of HTTP, HTTPS, FTP, Secure FTP, EDI, INT, AS2, SMTP, and SOAP.

31. The method of claim 19 further comprising connecting with selected ones of the client machines directly via a public wide area network.

32. The method of claim 19 further comprising connecting with selected ones of the client machines via an enterprise network associated with the enterprise associated with the users corresponding to the selected client machines.

33. The method of claim 19 further comprising, in accordance with the policy framework, allowing selected ones of the client machines to retain selected ones of the uploaded rich client objects and other uploaded data when the selected client machines are not connected to the system.

34. The method of claim 33 further comprising, when the selected client machines reconnect to the system, transmitting offline data generated and cached by the selected uploaded rich client objects when the selected client machines are not connected to the system.

35. The method of claim 33 further comprising transmitting offline data relating to the selected client machines to the selected client machines when the selected client

machines reconnect to the system, the offline data being generated and cached when the selected client machines are not connected to the system.

36. The method of claim 19 wherein selectively facilitating the interaction includes facilitating interaction between two or more of the services, thereby providing access to a composite service by at least some of the users.

37. An interoperability system for providing access to a plurality of services by a plurality of users having associated client machines, each of the plurality of users being associated with one of a plurality of independent enterprises, the plurality of services being associated with and controlled by a plurality of independent service providers and employing a plurality of interfaces at least some of which are not directly interoperable, the system comprising:

at least one data store having a directory stored therein which maps an identity corresponding to each of the users to a policy framework which defines access policies relating to the services, the identity for each user identifying the associated enterprise and a role associated with the user in the associated enterprise; and

at least one computing device which is operable to connect with each of the client machines and each of the interfaces associated with the services, to selectively facilitate interaction among the client machines and the services with reference to the directory and the policy framework, and to facilitate consumption of the services in a unique manner for each user in accordance with the corresponding identity.

38. The system of claim 37 wherein the at least one data store also has a plurality of rich client objects stored therein which are operable to be launched within browser environments on the client machines, and to interact with the services via the interoperability system, the at least one computing device being operable to facilitate the consumption of the services in the unique manner using the rich client objects.

39. The system of claim 38 wherein the at least one computing device is further operable to selectively upload the rich client objects to the client machines with reference to the directory, and to selectively facilitate interaction among the uploaded rich client objects and the services with reference to the directory and the policy framework.

40. The system of claim 37 wherein the at least one computing device is operable to connect with each of the client machines using any of HTTP, HTTPS, FTP, Secure FTP, EDI, INT, AS2, SMTP, and SOAP.

41. The system of claim 37 wherein the at least one computing device is operable to connect with each of the interfaces using any of HTTP, HTTPS, FTP, Secure FTP, EDI, INT, AS2, SMTP, and SOAP.

42. The system of claim 37 wherein the at least one computing device is operable to receive offline data generated and cached by selected client machines when the selected client machines are not connected to the system, the offline data being received by the at least one computing device when the selected client machines reconnect to the system.

43. The system of claim 37 wherein the at least one computing device is operable to generate and cache offline data relating to selected client machines when the selected client machines are not connected to the system, the at least one computing device further being operable to transmit the offline data to the selected client machines when the selected client machines reconnect to the system.

44. The system of claim 37 wherein selective facilitation of the interaction includes facilitation of interaction between two or more of the services, thereby providing access to a composite service by at least some of the users.

45. The system of claim 37 wherein the at least one computing device is operable to facilitate the consumption of the services in the unique manner using HTML pages.

46. The system of claim 37 wherein the at least one computing device is operable to facilitate the consumption of the services in the unique manner in conjunction with client-side applications.

47. A computer-implemented method for providing access to a plurality of services by a plurality of users having associated client machines, each of the plurality of users being associated with one of a plurality of independent enterprises, the plurality of services being associated with and controlled by a plurality of independent service providers and employing a plurality of interfaces at least some of which are not directly interoperable, the method comprising:

connecting with each of the client machines and each of the interfaces associated with the services;

selectively facilitating interaction among the client machines and the services with reference to a directory and a policy framework, the directory being operable to map an identity corresponding to each of the users to the policy framework which defines access policies relating to the services, the identity for each user identifying the associated enterprise and a role associated with the user in the associated enterprise; and

facilitating consumption of the services in a unique manner for each user in accordance with the corresponding identity.

48. The method of claim 47 further comprising facilitating the consumption of the services in the unique manner using rich client objects, the rich client objects being operable to be launched within browser environments on the client machines, and to interact with the services.

49. The method of claim 48 further comprising selectively uploading the rich client objects to the client machines with reference to the directory, and selectively facilitating interaction among the uploaded rich client objects and the services with reference to the directory and the policy framework.

50. The method of claim 47 wherein connecting with each of the client machines comprises using any of HTTP, HTTPS, FTP, Secure FTP, EDI, INT, AS2, SMTP, and SOAP.

51. The method of claim 47 wherein connecting with each of the interfaces comprises using any of HTTP, HTTPS, FTP, Secure FTP, EDI, INT, AS2, SMTP, and SOAP.

52. The method of claim 47 further comprising receiving offline data generated and cached by selected client machines when reconnecting with the selected client machines.

53. The method of claim 47 further comprising generating and caching offline data relating to selected client machines, and transmitting the offline data to the selected client machines when reconnecting with the selected client machines.

54. The method of claim 47 wherein selectively facilitating the interaction includes facilitating interaction between two or more of the services, thereby providing access to a composite service by at least some of the users.

55. The method of claim 47 wherein facilitating the consumption of the services in the unique manner comprises using HTML pages.

56. The method of claim 47 wherein facilitating the consumption of the services in the unique manner is accomplished in conjunction with client-side applications.